

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-17 (canceled).

18. (new) An electrolyte matrix for a molten carbonate fuel cell, which comprises a matrix material, which, in the green state, contains at least one lithium compound, aluminum oxide, and a carbide, wherein the matrix material contains a combination of lithium carbonate, aluminum oxide, and titanium carbide in the green state.

19. (new) The electrolyte matrix in accordance with claim 18, wherein the matrix material additionally contains aluminum hydroxide.

20. (new) The electrolyte matrix in accordance with claim 18, wherein the matrix material additionally contains nanoscale secondary particles.

21. (new) The electrolyte matrix in accordance with claim 20, wherein the matrix material contains at least one material from the group consisting of ZrO_2 , SiO_2 , Al_2O_3 , and TiO_2 as the nanoscale secondary particles.

22. (new) The electrolyte matrix in accordance with claim 18, wherein the matrix material is composed to undergo synthesis, accompanied by an increase in volume, when the fuel cell is started up, and contains lithium aluminate and lithium titanate after the start-up.

23. (new) The electrolyte matrix in accordance with claim 22, wherein the electrolyte matrix has an open porosity of 30-70% after the start-up of the fuel cell.

24. (new) The electrolyte matrix in accordance with claim 23, wherein the open porosity is 50-70%.

25. (new) The electrolyte matrix in accordance with claim 22, wherein the volume increase at which the matrix material undergoes synthesis during the start-up of the fuel cell is 2.5-5%.

26. (new) The electrolyte matrix in accordance with claim 25, wherein the volume increase is 3-4%.

27. (new) A method for producing an electrolyte matrix for a molten carbonate fuel cell, comprising producing the electrolyte matrix from a matrix material that contains a combination of lithium carbonate, aluminum oxide, and titanium carbide.

28. (new) The method in accordance with claim 27, wherein the matrix material additionally contains aluminum hydroxide.

29. (new) The method in accordance with claim 27, wherein the matrix material additionally contains nanoscale secondary particles.

30. (new) The method in accordance with claim 29, wherein the matrix material contains at least one material from the group consisting of ZrO_2 , SiO_2 , Al_2O_3 , and TiO_2 as the nanoscale secondary particles.

31. (new) The method in accordance with claim 27, including mixing the matrix material in finely powdered form with a dispersion medium/solvent to form a matrix slurry, which is then shaped and dried.

32. (new) The method in accordance with claim 31, wherein the matrix slurry has a solids content of 50-80%.

33. (new) The method in accordance with claim 32, wherein the solids content is 60-70%.

34. (new) The method in accordance with claim 31, including shaping the matrix slurry by casting, spraying, rolling, or application by doctor blade.

35. (new) The method in accordance with claim 27, including incorporating the electrolyte matrix in the fuel cell in the “green” state, the matrix undergoing synthesis during start-up of the fuel cell.

36. (new) The method in accordance with claim 35, wherein the matrix material undergoes synthesis during the start-up of the fuel cell with the formation of lithium aluminate and lithium titanate.

37. (new) The method in accordance with claim 36, wherein the synthesis of the electrolyte matrix is accompanied by an increase in volume.